Code: 9A15403

B.Tech II Year II Semester (R09) Supplementary Examinations December/January 2015/2016
PRINCIPLES OF PROGRAMMING LANGUAGES
(Information Technology)

Time: 3 hours   Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 (a) Explain different programming domains with example languages.
   (b) Explain any two syntactic design choices that effect readability of a program.

2 (a) Explain what the precondition and post conditions of a given statement mean in axiomatic semantics.
   (b) Describe the basic concept of Denotational semantics.

3 (a) Explain about named constants and variable initialization.
   (b) Explain the concepts of type checking and type compatibility in detail.

4 (a) Explain different forms of assignment statements with examples.
   (b) How parentheses are used to alter the precedence and associativity rules? Explain with examples.

5 (a) What is operator overloading? Write a C++ Program for operator overloading.
   (b) Explain generic functions in C++.

6 (a) What is a task? What are different categories of tasks? Differentiate between task and subprogram.
   (b) What is competition synchronization? Explain the need for competition synchronization.

7 (a) Clearly explain the design issues of exception handling.
   (b) What are the possible frames for exception in Ada?

8 (a) Write a function to find the roots of a quadratic equation by using Haskell.
   (b) Discuss in detail about the list comprehensions using Haskell.

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